

ABSTRACT OF THE DISCLOSURE

A semiconductor device comprises a collector layer comprising a first kind of semiconductor material; a
5 base layer including a first base portion and a second base portion, said first base portion coming in contact with the first collector layer and comprising the first kind of semiconductor material, said second base portion coming in contact with the first base portion and
10 comprising a second kind of semiconductor material; and an emitter layer coming in contact with the base layer and comprising the first kind of semiconductor material, said emitter layer forming a heterojunction with the base layer.